

PROPOSAL EVALUATION

Proposition 84 Integrated Regional Water Management (IRWM) Grant Program Implementation Grant, Round 1, FY 2010-2011

Applicant	City of Nevada City	Amount Requested	\$3,910,264
Proposal Title	CABY Region Integrated Water Use Efficiency & Drought Preparedness Program	Total Proposal Cost	\$4,346,354

PROPOSAL SUMMARY

Eighteen projects are included in the proposal: (1) Alta/Colfax - Leak Detection and Repair, (2) American Rivers-CABY Water Trust, (3) Gracie Road Intertie, (4) Installation of Altitude Valves and SCADA System on Storage Tanks,(5) Nevada City - Installation of Water Meters on City Facilities,(6) Nevada City Integrated Water Shortage Contingency and Comprehensive Drought Preparedness Program, (7) Nevada City Leak Detection and Repair, (8) Park Distribution System Improvement, (9) Prospect Street Distribution System Improvement, (10) South Pine Distribution System Improvement, (11) WCWD - Level-control Altitude Valves on Storage Tank, (12) WCWD - Maybert Road Distribution Line Improvements, (13) WCWD - Relief Hill Road - Flow Control Pressure Improvements, (14) WCWD Integrated Water Shortage Contingency and Comprehensive Drought Preparedness Program, (15) WCWD -System-wide Installation of Water Meters, (16) WCWD-Leak Detection and Repair - Needs Assessment and Feasibility Study with Repair of High-priority Leaks, (17) Grizzly Flats - Leak Detection and Repair, and (18) Grizzly Flats - Reservoir Relining.

PROPOSAL SCORE

Criteria	Score/ Points Possible	Criteria	Score/ Points Possible
Work Plan	12/15	Economic Analysis – Water Supply Costs and Benefits	9/15
Budget	5/5	Water Quality and Other Expected Benefits	6/15
Schedule	5/5	Economic Analysis – Flood Damage Reduction	0/15
Monitoring, Assessment, and Performance Measures	4/5	Program Preferences	10/10
Total Score (max. possible = 85)			51

EVALUATION SUMMARY

The following is a review summary of the proposal.

Work Plan

The criterion is fully addressed, but is not supported by thorough documentation or sufficient rationale. The applicant presents a short history of the region and the proposal. Goals and objectives of the proposal are discussed in detail and applicant focuses on the interests of the Disadvantaged Communities (DAC) in the

region. Maps showing project locations are included. The application discusses how the projects that are located throughout four watersheds are linked and integrated even though they are stand-alone projects. Collectively, the proposed projects support the stated goals of water loss savings, resiliency to drought and open exchange of project information. California Environmental Quality Act (CEQA) status and need and required permits are indicated. Two projects have their 100% engineering design complete; fourteen projects are located in the DAC areas, five of which were submitted by the town of Washington.

Budget

The criterion is fully addressed and supported by thorough and well-presented documentation and logical rationale. Each budget has been prepared by the project sponsor and provides a level of details that is commensurate with the design stages of the projects. Budget tables are detailed and include all tasks discussed in the work plan. The labor rates are listed depicted and costs are reasonable. Engineering estimates were attached for every project budget. The budget is very detailed, reasonable and sufficiently supported.

Schedule

The criterion is fully addressed and supported by thorough and well-presented documentation and logical rationale. The schedule is detailed and reasonable. The schedule tasks are presented to subtask level. Five of the projects will start construction within six months of anticipated award date.

Monitoring, Assessment, and Performance Measures

The criterion is fully addressed, but is not supported by thorough documentation or sufficient rationale. The performance measure tables have most of the needed elements to assess output and outcome of the projects. Each project presents a table that lists the project goals, desired outcomes, output indicators, outcome indicators, and measurement tools and methods, and targets. Outcome changes will be monitored with leak detection, water treatment system meters and other direct and indirect measures of water use and savings. Monitoring elements should show water savings in the near term. Additional direct monitoring of instream flow (increased flow is a major goal of the proposal) and water quality would constitute a better program to monitor and measure performances.

Economic Analysis – Water Supply Costs and Benefits

Only average levels of water supply benefits relative to costs can be realized through this proposal, as demonstrated by the analysis and supporting documentation. Applicant provides a good analysis and explanation of costs. Description of benefits is excellent. References are provided. Quantified values are relatively low, but are intended to be conservative.

Project 1 includes a leak detection and repair component and a conservation component. Costs are \$0.296 million (M) in Present value (PV). Calculations appear to be sound and capital matches Table 7. Project results in a reduction of 60 AF per year in diversion, and is valued at an average value in alternative uses that include municipal, agricultural, environmental and hydropower use. The value used is \$69/AF. Similar to the other projects, the reviewer considers this a very conservative estimate of the water's value. Applicant acknowledges that the fate of the leaked water could also end up back in surface streams, though at undetermined time, location, and value. Avoided treatment and operations cost is also estimated. Total quantified benefit is \$0.065 in PV. Avoided shortage and infrastructure failure costs are described qualitatively.

Project 2 would provide funding for the planning, regional coordination, and other activities that would support water acquisition for environmental purposes. Cost is \$0.18 in PV. There are no quantified water supply benefits.

Projects 3 through 10 are a mix of projects that would upgrade facilities, repair leaks, install water meters, implement a conservation program for customers, and fund an integrated facilities and conservation plan. PV of costs is \$1.17 M (reviewer notes a minor discrepancy in capital costs compared to Table 7, though other projects matched exactly). Proposal presents a summary of recent water transfer process in the basin to estimate the value of the water saved. Cost table appears properly constructed. Costs are incurred for a longer duration than quantified benefits, and are related to costs for project components that produce non quantified benefits. The applicant chose to use a conservatively short period for quantified benefits. Both avoided Nevada Irrigation District (NID) purchases and an instream flow benefit are included. Cost to buy water from NID reflects NID's average cost to provide the water, so it would not consider instream flow benefits – reviewer concludes this is not double counting (the sum of the values is still within the reasonable range of unit value for water). A separate table quantifies the avoided treatment, operations, and customer shortage costs. All are explained and documented in text. PV of quantified benefits is \$0.492 M.

Projects 11 through 16, categories of benefits, description, and quantification approach are similar to those for Projects 3 through 10. Costs are shown in 2009 \$ values and capital cost matches that shown in Table 7. Total PV of cost is \$1.2 M. Quantified WS benefit is \$0.187 M in PV. Non quantified benefits include avoided capital and shortage costs from infrastructure failure.

Projects 17 and 18 are projects with a mix of components including reservoir lining, leak detection/repair, other capital improvements, and conservation. Total cost of those items is \$0.795 M in PV. Costs are shown in 2009 \$ values and study cost matches that shown in Attachment 4. Quantified benefits include the avoided cost of purchasing replacement water, avoided shortage costs, avoided operations costs, and value of instream flow. Instream flow is valued using the unsaved portion of reservoir seepage. It appears that this would occur without project anyway, so should not be counted (it is a very small value anyway). Non quantified benefits include avoided water treatment costs and infrastructure failure costs.

Water Quality and Other Expected Benefits

Only average levels of water quality and other benefits relative to costs can be realized through this proposal; however, the quality of the analysis was partially lacking. Water quality benefits are described but not quantified. Some of the water quality benefits are likely already captured in the avoided costs for instream flow, which is already quantified as water supply benefits.

Qualitative benefits for Projects 1 and 11 through 16 are similar to those described for the Nevada City project. The Grizzly Flats CSD also has similar categories of non quantified benefits. In addition, the applicant describes recreation benefits to a bass fishery in Grizzly Pond.

Project 2 would improve the structure and knowledge base for direct participants and stakeholders in local water management decisions. This is described as potentially helping to reduce barriers, lack of trust and conflicts, and leading to better performance of the Trust's activities over time.

Project's 3 through 10 water quality and other benefits are not quantified, but include water quality improvements to instream flows, passive use and cultural benefits to ecosystem and fisheries, and

recreation quality improvement. These benefits are already at least partially captured in the quantified water supply benefit of avoided purchases for instream flow.

Economic Analysis – Flood Damage Reduction

Applicant did not claim any flood reduction benefits.

Program Preferences

The applicant sufficiently documents the breadth and magnitude of Program Preference claims with high levels of certainty. The Proposal addresses needs for Drought preparation by fixing water leaks, establishing a multifaceted water conservation effort, establishing a structure for transferring water rights to increasing instream flows and the critical water supply needs of DAC in the Region. Other claimed Program Preferences are: Include regional projects or programs, Effectively integrate water management programs and projects within hydrologic region, Use and reuse water more efficiently, and Climate change response actions.